AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (cancelled)

Claim 2 (currently amended): A method for presenting analysis of a plurality of ~~individual~~ quantitative lipid metabolite profiles, comprising:

designating the plurality of ~~individual~~ quantitative lipid metabolite profiles;

identifying ~~at least one difference or at least one similarity in a lipid metabolite in~~ differences or similarities in a plurality of lipid metabolites between the ~~plurality of individual~~ quantitative lipid metabolite profiles;

and displaying ~~at least one difference or at least one similarity in the lipid metabolite in~~ the identified differences or similarities on a heat map ~~the plurality of individual quantitative lipid metabolite profiles, wherein the at least one difference or at least one similarity is displayed on a heat map or targeting chart~~.

Claim 3 (original): The method of claim 2, wherein each quantitative lipid metabolite profile comprises quantitative measurements of at least two lipids and wherein the quantified measurements are obtained using an internal standard for at least one of the lipids.

Claim 4 (original): The method of claim 3, wherein the lipid metabolites are selected from the group consisting of tetradecanoic acid, pentadecanoic acid, hexadecanoic acid, heptadecanoic acid, octadecanoic acid, eicosanoic acid, docosanoic acid, tetracosanoic acid, 9-tetradecenoic acid, 9-hexadecenoic acid, 11-octadecenoic acid, 9-octadecenoic acid, 11-eicosenoic acid, 5,8,11-eicosatrienoic acid, 13-docosenoic acid, 15-tetracosenoic acid, 9,12,15-octadecatrienoic acid, 6,9,12,15-octadecatetraenoic acid, 11,14,17-eicosatrienoic acid, 8,11,14,17-eicosictetraenoic acid, 5,8,11,14,17-eicosapentaenoic acid, 7,10,13,16,19-docosapentaenoic acid, 4,7,10,13,16,19-

docosahexaenoic acid, 6,9,12,15,18,21-tetracoshexaenoic acid, 9,12-octadecadienoic acid, 6,9,12-octadecatrienoic acid, 11,14-eicosadienoic acid, 8,11,14-eicosatrienoic acid, 5,8,11,14-eicosicatetraenoic acid, 13,16-docsadienoic acid, 7,10,13,16-docosicatetraenoic acid, 4,7,10,13,16-docosapentaenoic acid, 9-trans-hexadecenoic acid, 9-trans-octadecenoic acid, 8-eicosaenoic acid, 5-eicosaenoic acid, plasmalogen fatty acids, 5b-cholestan-3b-ol, 5a-cholestan-3b-ol, 5-cholesten-3b-ol, 5,24-cholestadien-3b-ol, 5-cholestan-25a-methyl-3b-ol, 5-cholestan-24b-methyl-3b-ol, 5-cholesten-24b-ethyl-3b-ol, and 5,22-cholestadien-24b-ethyl-3b-ol, each as a compound or a component of a lipid molecule.

Claim 5 (original): The method of claim 2, wherein the quantitative lipid metabolite profiles each comprise a quantified measurement of a lipid in a lipid class.

Claim 6 (original): The method of claim 5, wherein the quantified measurement of the lipid in the lipid class is obtained using an internal standard for the lipid class.

Claim 7 (original): The method of claim 5, wherein the lipid is selected from the group consisting of fatty acid 16:0, 18:0, 16:1n7; 18:1n7; 18:1n9; 18:3n3; 20:5n3; 22:5n3; 22:6n3; 18:2n6; 18:3n6; 20:3n6; and 20:4n6.

Claim 8 (original): The method of claim 5, wherein the lipid is a sterol selected from the group consisting of 5b-cholestan-3b-ol, 5a-cholestan-3b-ol, 5-cholesten-3b-ol, 5,24-cholestadien-3b-ol, 5-cholestan-25a-methyl-3b-ol, 5-cholestan-24b-methyl-3b-ol, 5-cholesten-24b-ethyl-3b-ol, and 5,22-cholestadien-24b-ethyl-3b-ol.

Claim 9 (original): The method of claim 5, wherein the lipid class is selected from the group consisting of lyso-phosphatidylcholine, sphingomyelin, phosphatidylcholine, phosphatidylserine, phosphatidylinositol, phosphatidylethanolamine, cardiolipin, free fatty acids, monoacylglycerides, diacylglycerides, triacylglycerides, and cholesterol esters.

Claim 10 (original): The method of claim 6, wherein the internal standard is selected from the group consisting of diheptadecanoyl phosphatidylcholine, dipentadecaenoyl phosphatidylethanolamine, tetraheptadecenoyl cardiolipin, diheptadecenoyl phosphatidylserine, pentadecenoyl sphingomyelin, heptadecanoyl lyso-phosphatidylcholine, triheptadecaenoyl glyceride, pentadecaenoic acid, heptadecanoic cholesterol ester and free fucosterol.

Claim 11 (original): The method of claim 6, wherein the internal standard is heptadecanoic 1-heptadecanoyl-2-lyso-phosphatidycholine for the lipid class of lysophospholipids, N-pentadecenoyl-D-erythro-sphingosylphorylcholine for the lipid class of sphingomyelin, 1,2 diheptadecanoylphosphatidylcholine for the lipid class of phosphatidylcholine, 1,2-diheptadecenoylphosphatid- ylethanolamine for the lipid class of phosphatidylethanolamine, 1,2-diheptadecenoylphosphatidylserine for the lipid class of phosphatidylserine, pentadecaenoic acid for the lipid class of free fatty acids, triheptadecaenoic acid for the lipid class of triacylglycerides, 1,1',2,2'-tetraheptadecaenoyl cardiolipin for the lipid class of cardiolipin, cholesteryl heptadecanoate for the lipid class of cholesterol esters and stigmasterol for the lipid class of free sterols.

Claim 12 (currently amended): The method of claim 2, wherein at least one of the ~~individual~~ quantitative lipid metabolite profiles is generated using a method comprising: separating a biological sample into fractions based on a plurality of lipid classes, wherein at least one quantitative internal standard is included for each lipid class; and measuring the quantity of a plurality of lipid metabolites in the fractions.

Claim 13 (original): The method of claim 12, wherein the plurality of lipid classes comprises lyso-phosphatidylcholines, sphingomyelins, phosphatidylcholines, phosphatidylserines, phosphatidylinositols, phosphatidylethanolamines, cardiolipins, free fatty acids, monoacylglycerides, diacylglycerides, triacylglycerides, or cholesterol esters.

Claim 14 (original): The method of claim 12, wherein the plurality of lipid metabolites comprises at least one of tetradecanoic acid, pentadecanoic acid, hexadecanoic acid, heptadecanoic acid,

octadecanoic acid, eicosanoic acid, docosanoic acid, tetracosanoic acid, 9-tetradecenoic acid, 9-hexadecenoic acid, 11-octadecenoic acid, 9-octadecenoic acid, 11-eicosenoic acid, 5,8,11-eicosatrienoic acid, 13-docosenoic acid, 15-tetracosenoic acid, 9,12,15-octadecatrienoic acid, 6,9,12,15-octadecatetraenoic acid, 11,14,17-eicosatrienoic acid, 8,11,14,17-eicosictetraenoic acid, 5,8,11,14,17-eicosapentaenoic acid, 7,10,13,16,19-docosapentaenoic acid, 4,7,10,13,16,19-docosahexaenoic acid, 6,9,12,15,18,21-tetracoshexaenoic acid, 9,12-octadecadienoic acid, 6,9,12-octadecatrienoic acid, 11,14-eicosadienoic acid, 8,11,14-eicosatrienoic acid, 5,8,11,14-eicosicatetraenoic acid, 13,16-docsadienoic acid, 7,10,13,16-docosicatetraenoic acid, 4,7,10,13,16-docosapentaenoic acid, 9-trans-hexadecenoic acid, 9-trans-octadecenoic acid, 8-eicosaenoic acid, 5-eicosaenoic acid, plasmalogen fatty acids, 5b-cholestan-3b-ol, 5a-cholestan-3b-ol, 5-cholesten-3b-ol, 5,24-cholestadien-3b-ol, 5-cholestan-25a-methyl-3b-ol, 5-cholestan-24b-methyl-3b-ol, 5-cholesten-24b-ethyl-3b-ol, or 5,22-cholestadien-24b-ethyl-3b-ol, each as a compound or a component of a lipid molecule.

Claim 15 (original): The method of claim 12, wherein separating comprises chromatography.

Claim 16 (original): The method of claim 12, wherein measuring comprises chromatography.

Claim 17 (original): The method of claim 2, wherein displaying generates a web page for viewing.

Claims 18-55 (cancelled)

Claim 56 (currently amended): The method of claim ~~55~~2, wherein an increase or decrease in the lipid metabolite is indicated on the heat map by a color and the relevant amount of the increase or decrease is indicated by the intensity of the color.

Claim 57 (previously presented): The method of claim 2, further comprising generating a written report.

Claim 58 (new): The method of claim 2, wherein one of the quantitative lipid metabolite profiles is a control lipomic profile.